



Subject: Material Safety Data Sheets

Date: 06/23/2009

Dear Sirs and Madams,

Please find enclosed the MSDS's sent to you in accordance to the regulations of the sending country relative to the products(s).

SULFRZOL(TM) 54

This information is provided to you for the following reason:

The MSDS was requested by you.

Thanking you in advance for your cooperation, please accept our best regards,

**The Lubrizol Corporation
29400 Lakeland Boulevard
Wickliffe, Ohio 44092
Tel: (440) 943-4200**

Log on to www.mylubrizol.com to get the most up to date MSDS. You can also view the MSDS Change Report online that lists MSDS with changes in the last 30 days.



Prepared according to 29CFR 1910.1200.

1	Chemical Product and Company Identification
----------	--

*The Lubrizol Corporation
 29400 Lakeland Boulevard
 Wickliffe, Ohio 44092
 Tel: (440) 943-4200*

Product Trade Name	SULFRZOL(TM) 54
CAS Number	Confidential.
Synonyms	None.
Generic Chemical Name	Olefin sulfide
Product Type	Multipurpose.
Preparation/Revision Date	12 May 2009
Transportation Emergency Phone No.	FOR TRANSPORT EMERGENCY call CHEMTREC: (-1) 703-527-3887 (outside the U.S.), 1-800-424-9300 (in the U.S.)
MSDS No.	17174681-2117215-1010960-102103

2	Hazards Identification
----------	-------------------------------

Appearance	Amber colored liquid.
Odor	Low odor similar to gas oil.
Principal Hazards	Caution. <ul style="list-style-type: none"> • May cause allergic skin reaction. • Container vapor space may contain hydrogen sulfide may cause respiratory irritation.

See Section 11 for complete health hazard information.

3	Composition/Information on Ingredients
----------	---

Hazardous Ingredients

Comp	CAS No.	Percentage (by wt.)	Carcinogen
Olefin sulfide	Confidential.	From 90 to 100 percent	N/E
Hydrogen sulfide	7783-06-4	< 0.1%	N/E

(N/E) - None established

4	First Aid Measures
----------	---------------------------

Eyes	Flush with water at least 30 minutes. Get medical attention if eye irritation develops or persists.
-------------	---

Skin	Wash with plenty of soap and water. Remove contaminated clothing. If skin irritation occurs, get medical attention. Launder contaminated clothing before reuse and discard leather articles saturated with the material.
Inhalation	Remove exposed person to fresh air if adverse effects are observed. If breathing is labored, administer oxygen. If breathing has stopped, apply artificial respiration. CONTINUE UNTIL VICTIM RESUMES BREATHING.
Oral	DO NOT INDUCE VOMITING. Get immediate medical attention.
Additional Information	Note to physician: Hydrosulfide anion is strongly bound to hemoglobin in a manner similar to cyanide. A dose of sodium nitrite would produce methemoglobin in the blood which would then partially inactivate this poison.

5	Fire Fighting Measures
----------	-------------------------------

Flash Point	> 100 °C, 212 °F PMCC (Minimum)
Extinguishing Media	CO ₂ , dry chemical, or foam. Water can be used to cool and protect exposed material.
Firefighting Procedures	Recommend wearing self-contained breathing apparatus. Water may cause splattering.
Unusual Fire & Explosion Hazards	Toxic fumes, gases or vapors may evolve on burning or exposure to heat. Material may contain hydrogen sulfide. Hydrogen sulfide is a toxic and flammable gas.

6	Accidental Release Measures
----------	------------------------------------

Spill Procedures	Personal Protective Equipment must be worn, see Personal Protection Section for PPE recommendations. Remove sources of ignition. Ventilate spill area. Prevent entry into sewers and waterways, dispose of in accordance with all federal, state and local environmental regulation. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material.
-------------------------	--

7	Handling and Storage
----------	-----------------------------

Pumping Temperature	Not determined.
Maximum Handling Temperature	60 °C, 140 °F
Handling Procedures	Keep away from potential sources of ignition. Liberates hydrogen sulfide gas. Open container carefully and only in adequately ventilated areas or use appropriate respiratory protection. Keep containers closed when not in use. Do not discharge into drains or the environment, dispose to an authorized waste collection point. Use appropriate containment to avoid environmental contamination. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Launder contaminated clothing before reuse. Empty container contains product residue which may exhibit hazards of product.
Maximum Storage Temperature	45 °C, 113 °F
Storage Procedures	Do not store near potential sources of ignition. Store in well ventilated place.
Loading Temperature	Not determined.

8	Exposure Controls/Personal Protection
----------	--

Exposure Limits

Comp	Exposure Guidelines					
	OSHA		ACGIH		Other	
	TWA	STEL	TWA	STEL	TWA	STEL
Hydrogen sulfide	10 ppm	15 ppm	10 ppm	15 ppm	N/E	N/E

- (s) - Skin exposure
 (p) - Proposed limit
 (c) - Ceiling exposure
 (l) - Recommended exposure limit
 (u) - Supplier recommended exposure limit
 (N/E) - None established

Other Exposure Limits	Material may liberate hydrogen sulfide gas. The ACGIH TLV-TWA for hydrogen sulfide is 10 ppm, the ACGIH 15 minute STEL is 15 ppm. The OSHA acceptable ceiling concentration for hydrogen sulfide is 20 ppm. A 10 minute maximum peak of 50 ppm is permitted once, only if no other measurable exposure occurs. The National Institute of Occupational Safety and Health immediately dangerous to life or health (IDLH) value is 300 ppm.
Engineering Controls	Use local exhaust ventilation to control mists or vapors.
Gloves Procedures	Use nitrile or neoprene gloves.
Eye Protection	Safety Glasses.
Respiratory Protection	Use NIOSH/MSHA approved respirator with a combination organic vapor and high efficiency filter cartridge if recommended exposure limit is exceeded. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites. Hydrogen sulfide causes olfactory fatigue and thus has poor warning properties. NIOSH recommends the use of full faced supplied air respirator if exposure limits are exceeded.
Clothing Recommendation	Long sleeve shirt is recommended. Use chemically protective boots when necessary to avoid contaminating shoes. Do not wear rings, watches or similar apparel that could entrap the material and cause a skin reaction. Launder contaminated clothing before reuse.

9	Physical and Chemical Properties
Flash Point	> 100 °C, 212 °F PMCC (Minimum)
Upper Flammable Limit	Not determined.
Lower Flammable Limit	Not determined.
Autoignition Point	Not determined.
Explosion Data	Material does not have explosive properties.
Vapor Pressure	Not determined.
pH	Not determined.
Specific Gravity	1.09 (15.6 °C)
Bulk Density	Not determined.
Water Solubility	Insoluble.
Percent Solid	Not determined.
Percent Volatile	Not determined.
Volatile Organic Compound	Not determined.
Vapor Density	Not determined.
Evaporation Rate	Not determined.
Odor	Low odor similar to gas oil.
Appearance	Amber colored liquid.
Viscosity	5.5 Centistokes (40 °C)
Odor Threshold	Not determined.
Boiling Point	Not determined.
Pour Point Temperature	Not determined.
Melting / Freezing Point	Not determined.

The above data are typical values and do not constitute a specification. Vapor pressure data are calculated unless otherwise noted.

10	Stability and Reactivity
-----------	---------------------------------

Stability	Material is normally stable at moderately elevated temperatures and pressures.
Decomposition Temperature	Not determined.
Incompatibility	None known, avoid contact with reactive chemicals.
Polymerization	Will not occur.
Thermal Decomposition	Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion. Hydrogen sulfide and alkyl mercaptans and sulfides may also be released. Under combustion conditions, oxides of the following elements will be formed: sulfur. Hydrogen sulfide may also be released.
Conditions to Avoid	Not determined.

11	Toxicological Information
-----------	----------------------------------

-- ACUTE EXPOSURE --

Eye Irritation	Not expected to cause eye irritation Based on data from components or similar materials.
Skin Irritation	Not expected to be a primary skin irritant. Based on data from components or similar materials.
Respiratory Irritation	Exposure to hydrogen sulfide can cause temporary loss of the sense of smell and irritation of the eyes, nose or throat.
Dermal Toxicity	The LD50 in rabbits is > 2000 mg/Kg. Based on data from similar materials.
Inhalation Toxicity	Inhalation of high concentrations of hydrogen sulfide vapor may cause loss of consciousness and death. Inhalation of lower concentrations may cause headache, dizziness and nausea.
Oral Toxicity	The LD50 in rats is > 5000 mg/Kg. Based on data from similar materials.
Dermal Sensitization	May cause skin sensitization. Based on data from components or similar materials.
Inhalation Sensitization	No data available to indicate product or components may be respiratory sensitizers.

-- CHRONIC EXPOSURE --

Chronic Toxicity	No data available to indicate product or components present at greater than 1% are chronic health hazards.
Carcinogenicity	No data available to indicate any components present at greater than 0.1% may present a carcinogenic hazard.
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Reproductive Toxicity	No data available to indicate either product or components present at greater than 0.1% that may cause reproductive toxicity.
Teratogenicity	No data available to indicate product or any components contained at greater than 0.1% may cause birth defects.

-- ADDITIONAL INFORMATION --

Other	No other health hazards known.
--------------	--------------------------------

12	Ecological Information
-----------	-------------------------------

-- ENVIRONMENTAL TOXICITY --

Freshwater Fish Toxicity	The acute LC50 is > 1000 mg/L based on similar materials.
Freshwater Invertebrates Toxicity	The acute EC50 is > 1000 mg/L based on similar materials.
Algal Inhibition	Not determined.

Saltwater Fish Toxicity	Not determined.
Saltwater Invertebrates Toxicity	Not determined.
Bacteria Toxicity	The acute EC50 is > 1000 ppm based on similar materials.
Miscellaneous Toxicity	Not determined.

-- ENVIRONMENTAL FATE --

Biodegradation	This product will biodegrade moderately based on OECD 302-type test data for similar products.
Bioaccumulation	This material potentially bioconcentrates, based on QSAR calculated octanol/water coefficient data.
Soil Mobility	Not determined.

13	Disposal Considerations
-----------	--------------------------------

Waste Disposal	This material, if discarded, is not a hazardous waste under RCRA Regulation 40 CFR 261. Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.
-----------------------	--

14	Transport Information
-----------	------------------------------

ICAO/IATA I	Not regulated.
ICAO/IATA II	Not regulated.
IMDG	Not regulated.
IMDG EMS Fire	Not applicable.
IMDG EMS Spill	Not applicable.
IMDG MFAG	Not applicable.
MARPOL Annex II	Not determined.
USCG Compatibility	Not determined.
U.S. DOT Bulk	Not regulated.
U.S. DOT Non-Bulk	Not regulated.
DOT NAERG	Not applicable.
TDG Bulk	Not regulated.
TDG Non-Bulk	Not regulated.
Mexico	Not regulated.
Mexico Non-Bulk	Not regulated.
Bulk Quantity	29357.8 liters, 7756 gal.
Non-Bulk Quantity	207.8 liters, 55 gal.

Review classification requirements before shipping materials at elevated temperatures.

15	Regulatory Information
-----------	-------------------------------

-- Global Chemical Inventories --

USA	All components of this material are on the US TSCA Inventory or are exempt.
Other TSCA Reg.	None known.
EU	All components are in compliance with the EC Seventh amendment Directive 92 /32/EEC.
Japan	All components are in compliance with the Chemical Substances Control Law of Japan.

Australia	A component(s) of this product has been notified and assessed under the Industrial Chemicals (Notification and Assessment) Act, 1989. This product may be imported only by Lubrizol Australia.
New Zealand	May require notification before sale under New Zealand regulations.
Canada	All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List.
Switzerland	All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.
Korea	All components are in compliance in Korea.
Philippines	This product requires notification before sale in the Philippines.
China	All components of this product are listed on the Inventory of Existing Chemical Substances in China.

-- Other U.S. Federal Regulations --

SARA Ext. Haz. Subst.	This product does not contain greater than 1.0% of any chemical substance on the SARA Extremely Hazardous Substances list.								
SARA Section 313	This product does not contain greater than 1.0% (greater than 0.1% for carcinogenic substance) of any chemical substances listed under SARA Section 313.								
SARA 311 Classifications	<table border="1"> <tr> <td>Acute Hazard</td><td>Yes</td></tr> <tr> <td>Chronic Hazard</td><td>No</td></tr> <tr> <td>Fire Hazard</td><td>No</td></tr> <tr> <td>Reactivity Hazard</td><td>No</td></tr> </table>	Acute Hazard	Yes	Chronic Hazard	No	Fire Hazard	No	Reactivity Hazard	No
Acute Hazard	Yes								
Chronic Hazard	No								
Fire Hazard	No								
Reactivity Hazard	No								
CERCLA Hazardous Substances	None known.								
FDA Approval	Not applicable.								

-- State Regulations --

Cal. Prop. 65	This product contains the following chemical(s) known to the state of California to cause cancer and/or birth defects based on maximum impurity levels of components: 0.004% Naphthalene, CAS no. 91-20-3 0.016% Ethylbenzene, CAS no. 100-41-4
----------------------	---

-- Product Registrations --

U.S. Fuel Registration	Not applicable.
U.S. Dept of Agriculture	This product has not been filed with the USDA to support H2 approvals.
NSF Nonfood Compounds Registration	This product has not been filed with the NSF to support H1 or H2 approvals.
Finnish Registration Number	Not Registered
Swedish Registration Number	Not Registered
Norwegian Registration Number	75837
Danish Registration Number	1553118
Swiss Registration Number	Not Registered
Italian Registration Number	Not Registered
Korean Registration Number	This product is registered in Korea with the Ministry of the Environment.

-- Other / International --

TDG Regulated Limit.	None known.
-----------------------------	-------------

16

Other Information

US NFPA Codes

Health	Fire	Reactivity	Special
2	1	0	N/E

(N/E) - None established

HMIS Codes

Health	Fire	Reactivity
1	1	0

Precautionary Labels

Caution.

- May cause allergic skin reaction.
- Container vapor space may contain hydrogen sulfide may cause respiratory irritation.

Revision Indicators

Section: 2 Principal hazards.	Changed: 31 March 2009
Section: 3 Hazardous ingredients.	Changed: 31 March 2009
Section: 4 Skin first aid.	Changed: 29 March 2009
Section: 6 Spill procedures.	Changed: 29 March 2009
Section: 7 Handling procedures.	Changed: 29 March 2009
Section: 8 Clothing recommendations.	Changed: 29 March 2009
Section: 8 Hazardous ingredients.	Changed: 31 March 2009
Section: 8 Respiratory protection.	Changed: 29 March 2009
Section: 9 Odor threshold.	Changed: 27 October 2008
Section: 9 Percent volatile.	Changed: 27 October 2008
Section: 13 Waste disposal.	Changed: 22 October 2008
Section: 15 MISC. Regulatory info.	Changed: 22 October 2008
Section: 15 SARA section 311/312.	Changed: 29 March 2009
Section: 16 HMIS codes.	Changed: 29 March 2009
Section: 16 Miscellaneous information.	Changed: 22 October 2008
Section: 16 NFPA Codes.	Changed: 29 March 2009
Section: 16 Principal hazards.	Changed: 31 March 2009

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this product. Information contained herein is believed to be true and accurate but all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local regulations remains the responsibility of the user.